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# 2825

<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	10/066,187
	Filing Date	1/31/2002
	First Named Inventor	Steven Teig, et al.
	Group Art Unit	2825
	Examiner Name	Tat, B.
Total Number of Pages in This Submission	Attorney Docket Number	SPLX.P0133

Enclosures (Check all that apply)		
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PATENT  
Docket No. SPLX.P0133

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In the application of:

Steven Teig, et al.

Serial No.: 10/066,187

Filing Date: 1/31/2002

For: METHOD AND APPARATUS FOR  
ROUTING A SET OF NETS

**INFORMATION DISCLOSURE  
STATEMENT UNDER 37 C.F.R. § 1.97**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. § 1.97 and § 1.98, applicants submit with this Information Disclosure Statement the attached Form PTO-1449, and copies of the documents listed in the 1449 form for consideration by the Examiner. The Examiner is requested to make these documents of record. Applicants would appreciate the Examiner initialing and returning the Form PTO-1449, indicating that the information has been considered and made of record herein.

This Information Disclosure Statement under 37 C.F.R. § 1.97 is not to be construed as a representation that: (i) a complete search has been made; (ii) additional information material to

the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

This Information Disclosure Statement is submitted after receipt of a first Office Action on the merits but before the Final Office Action. Accordingly, a fee is required. However, Applicants note that on this day, April 21, 2004, Applicants have submitted another Information Disclosure Statement in electronic form and paid the requisite fee along with this electronic submission. See attached hard copy of electronic IDS and its fee transmittal. Therefore, Applicants submit that no separate fee is required for this Information Disclosure Statement.

However, in the unlikely event that the Patent Office determines that additional fees, extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 50-1128 referencing SPLX.P0133. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: April 21, 2004

Respectfully submitted,

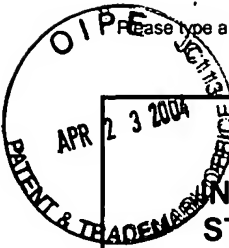
By: \_\_\_\_\_

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)				Application Number	10/066,187
				Filing Date	1/31/2002
				First Named Inventor	Steven Teig et al.
				Group Art Unit	2825
				Examiner Name	Tat, B.
Sheet	1	of	9	Attorney Docket Number	SPLX.P0133

**U.S. PATENT APPLICATIONS**

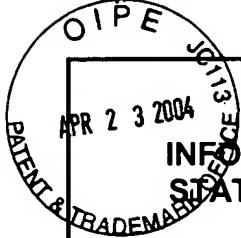
Examiner* Initials	Cite No. <sup>1</sup>	U.S. Patent Application		Name of Patentee or Applicant of Cited Document	Date of Filing MM-DD-YYYY	Related Application Data if any
		Serial Number	Attorney Docket Number			
	1.	10/066,060	SPLX.P0072	Steven Teig	01-31-2002	Application filed on the same date, with same specification and drawings, but with different summary and abstract.
	2.	10/066,160	SPLX.P0073	Steven Teig et al.	01-31-2002	Application filed on the same date, with same specification and drawings, but with different summary and abstract.
	3.	10/066,095	SPLX.P0074	Steven Teig et al.	01-31-2002	Application filed on the same date, with same specification and drawings, but with different summary and abstract.
	4.	10/066,047	SPLX.P0078	Steven Teig et al.	01-31-2002	Application filed on the same date, with same specification and drawings, but with different summary and abstract.
	5.	10/061,641	SPLX.P0079	Steven Teig et al.	01-31-2002	Application filed on the same date, with same specification and drawings, but with different summary and abstract.
	6.	10/066,094	SPLX.P0080	Steven Teig et al.	01-31-2002	Application filed on the same date, with same specification and drawings, but with different summary and abstract.
	7.	10/076,121	SPLX.P0081	Steven Teig et al.	02-12-2002	Application with similar, but not identical, specification and drawing as the present application.
	8.	10/062,995	SPLX.P0105	Steven Teig et al.	01-31-2002	Application filed on the same date, with same specification and drawings, but with different summary and abstract.
	9.	10/066,102	SPLX.P0106	Steven Teig	01-31-2002	Application filed on the same date, with same specification and drawings, but with different summary and abstract.
	10.	10/286,584	CDN.P0037	Steven Teig	10-31-2002	
	11.	10/335,087	CDN.P0038	Steven Teig et al.	12-31-2002	
	12.	10/335,239	CDN.P0039	Steven Teig et al.	12-31-2002	

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**INFORMATION DISCLOSURE  
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				First Named Inventor	Steven Teig et al.
				Group Art Unit	2825
				Examiner Name	Tat, B.
Sheet	2	of	9	Attorney Docket Number	SPLX.P0133
<b>U.S. PATENT APPLICATIONS</b>					
	13.	10/335,086	CDN.P0040	Steven Teig et al.	12-31-2002

**FOREIGN PATENT DOCUMENTS**

Examiner* Initials	Cite No. <sup>1</sup>	Foreign Patent Document			Date of Publication MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code (if known) <sup>5</sup>				
	14.	JP	11-296560		10-29-1999	Matsumoto et al.	with English translation of Abstract;	
	15.	JP	2000-082743		03-21-2000	Igarashi et al.	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	√
	16.	JP	64-15947		01-19-1989	Ouchi	with English translation of Abstract;	
	17.	JP	03-173471		07-26-1991	Tawada et al.	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	√
	18.	JP	04-000677		01-06-1992	Fujiwara et al.	with English translation of Abstract;	
	19.	JP	05-102305		04-23-1993	Sato	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	√
	20.	JP	05-243379		09-21-1993	Kubota	with Japanese Patent Office's English translation of Abstract; and with English	√

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# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet

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of

9

Application Number

10/066,187

Filing Date

1/31/2002

First Named Inventor

Steven Teig et al.

Group Art Unit

2825

Examiner Name

Tat, B.

Attorney Docket Number

SPLX.P0133

## FOREIGN PATENT DOCUMENTS

						translation of the application.	
21.	JP	07-086407		03-31-1995	Miura	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓
22.	JP	09-162279		06-20-1997	Yoshida	with Japanese Patent Office's English translation of Abstract; and with English translation of the application.	✓

## NON PATENT LITERATURE DOCUMENTS

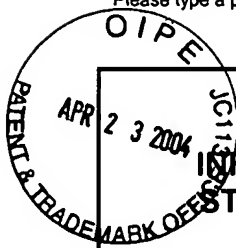
Examiner* Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>
	23.	Chen, H.F. et al., A Faster Algorithm for Rubber-Band Equivalent Transformation for Planar VLSI Layouts, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, vol. 15, No. 2, February 1996, pp. 217-227.	
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Sheet	4	of	9	Attorney Docket Number	SPLX.P0133

**NON PATENT LITERATURE DOCUMENTS**

Examiner* Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>
	30.	Hama, T. et al., Topological Routing Path Search Algorithm with Incremental Routability Test, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, vol. 18, No. 2, February 1999, pp. 142-150.	
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	44.	Yu, M.-F. et al., Fast and Incremental Routability Check of a Topological Routing Using a Cut-Based Encoding, UCSC-CRL-97-07, April 14, 1997.	

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**NON PATENT LITERATURE DOCUMENTS**

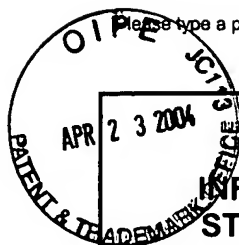
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| 57. | Chen, D-S. et al., A Wire-Length Minimization Algorithm for Single-Layer Layouts   |
| 58. | Chen et al., Optimal Algorithms for Bubble Sort Based Non-Manhattan Channel Routing, May 1994, Computer-Aided Design of Integrated Circuits and Systems, IEEE Transactions Volume: 13 Issues, pp. 603-609. |
| 59. | Chen, H., Routing L-Shaped Channels in Nonslicing-Structure Placement. 24 <sup>th</sup> ACM-IEEE Design Automation Conference, pp. 152-165, 1987.  |

Examiner  
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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet			6	of	9	Application Number	10/066,187
						Filing Date	1/31/2002
						First Named Inventor	Steven Teig et al.
						Group Art Unit	2825
						Examiner Name	Tat, B.
						Attorney Docket Number	SPLX.P0133

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				<b>Filing Date</b>	1/31/2002
				<b>First Named Inventor</b>	Steven Teig et al.
				<b>Group Art Unit</b>	2825
				<b>Examiner Name</b>	Tat, B.
<b>Sheet</b>	7	of	9	<b>Attorney Docket Number</b>	SPLX.P0133

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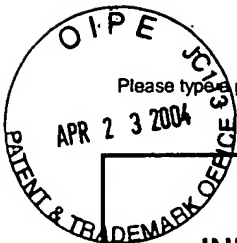
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Application Number	10/066,187
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Group Art Unit	2825
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Attorney Docket Number	SPLX.P0133

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of

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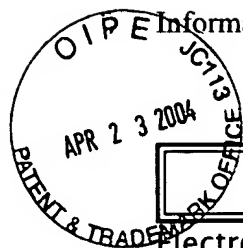
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Title of Invention	Method and apparatus for routing a set of nets																														
<p>Application Number: 10/066187 *10/066187*</p> <p>Confirmation Number: 5277</p> <p>First Named Applicant: Steven Teig</p> <p>Attorney Docket Number: SPLX.P0133</p> <p>Art Unit: 2825</p> <p>Examiner: Binh C. Tat</p> <p>Search string: ( 4615011 or 4782193 or 5633479 or 5634093 or 5635736 or 6128767 or 6219823 or 6226560 or 6262487 or 6295634 or 6436804 or 6490713 or 6546540 or 6645842 or 4673966 or 4855929 or 5360948 or 5375069 or 5532934 or 5578840 or 5618744 or 5636125 or 5637920 or 5650653 or 5657242 or 5663891 or 5717600 or 5723908 or 5742086 or 5757089 or 5757656 or 5777360 or 5811863 or 5822214 or 5838583 or 5859449 or 5889329 or 5889677 or 5898597 or 5914887 or 5973376 or 5980093 or 6035108 or 6038383 or 6058254 or 6067409 or 6068662 or 6088519 or 6111756 or 6123736 or 20020104061 or 20020100009 or 20020107711 or 20020182844 or 20030005399 or 20030188281 or 20010003843 or 20020174413 or 20030025205 or 20030121017 ).pn.</p> <p><b>US Patent Documents</b></p> <p>Note: Applicant is not required to submit a paper copy of cited US Patent Documents</p> <table border="1"><thead><tr><th>init</th><th>Cite.No.</th><th>Patent No.</th><th>Date</th><th>Patentee</th><th>Kind</th><th>Class</th><th>Subclass</th></tr></thead><tbody><tr><td></td><td>1</td><td>4615011</td><td>1986-09-30</td><td>Linsker</td><td></td><td></td><td></td></tr><tr><td></td><td>2</td><td>4782193</td><td>1988-11-01</td><td>Linsker</td><td></td><td></td><td></td></tr></tbody></table>								init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass		1	4615011	1986-09-30	Linsker					2	4782193	1988-11-01	Linsker			
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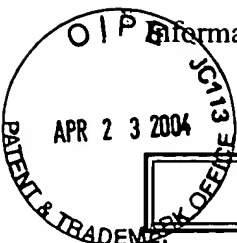
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	2	20020100009	2002-07-25	Xing et al.	A1		
	3	20020107711	2002-08-08	Xing et al.	A1		
	4	20020182844	2002-12-05	Igarashi et al.	A1		
	5	20030005399	2003-01-02	Igarashi et al.	A1		
	6	20030188281	2003-10-02	Xing	A1		
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	9	20030025205	2003-02-06	Shively	A1		
	10	20030121017	2003-06-26	Andreev et al.	A1		

Signature

<b>Examiner Name</b>	<b>Date</b>



**ELECTRONIC INFORMATION DISCLOSURE STATEMENT**

Electronic Version v1.8  
Stylesheet Version v1.8.0

<b>Title of Invention</b>	<b>Method and apparatus for routing a set of nets</b>
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Application Number: 10/066187 \*10/066187\*

Confirmation Number: 5277

First Named Applicant: Steven Teig

Attorney Docket Number: SPLX.P0133

Art Unit: 2825

Examiner: Binh C. Tat

Search string: ( 6155725 or 6166441 or 6175950 or 6209123 or 6216252 or 6230306 or 6247167 or 6253363 or 6260179 or 6289495 or 6292929 or 6301686 or 6324674 or 6327693 or 6327694 or 6330707 or 6378121 or 6385758 or 6401234 or 6405358 or 6407434 or 6412097 or 6412102 or 6463575 or 6473891 or 6519751 or 6526555 or 6543043 or 6557145 or 6567967 or 6586281 or 6665852 ).pn.

**US Patent Documents**

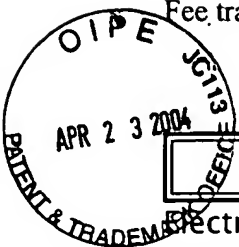
Note: Applicant is not required to submit a paper copy of cited US Patent Documents

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
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	2	6166441	2000-12-26	Geryk			
	3	6175950	2001-01-16	Scepanovic et al.	B1		
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	5	6216252	2001-04-10	Dangelo et al.	B1		
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Signature

Examiner Name	Date



## FEE TRANSMITTAL

Electronic Version v08

Stylesheet Version v08.0

<b>Title of Invention</b>	Method and apparatus for routing a set of nets								
Application Number: 10/066187 *10/066187*									
Date: 2002-01-31									
First Named Applicant: Steven Teig									
Attorney Docket Number: SPLX.P0133									
Art Unit: 2825									
Examiner: Binh C. Tat									
<b>TOTAL FEE AUTHORIZED \$180</b>									
Patent fees are subject to annual revisions on or about October 1st of each year.									
<b>BASIC FILING FEE</b>									
<table border="1"><thead><tr><th>Fee Description</th><th>Fee Code</th><th>Amount \$</th><th>Fee Paid \$</th></tr></thead><tbody><tr><td>Submission Of Information Disclosure Stmt Fee</td><td>1806</td><td>180</td><td>180</td></tr></tbody></table>		Fee Description	Fee Code	Amount \$	Fee Paid \$	Submission Of Information Disclosure Stmt Fee	1806	180	180
Fee Description	Fee Code	Amount \$	Fee Paid \$						
Submission Of Information Disclosure Stmt Fee	1806	180	180						
<b>AUTHORIZED BILLING INFORMATION</b>									
The commissioner is hereby authorized to charge indicated fees and credit any overpayments to:									
Credit account number: 7556									
Expiration Date (YYYYMMDD): 2004-08-31									
Authorized name: Mani Adeli									
Billing address: 94301									